

**CLAIMS:**

1. A linear object identification tag which can be attached to and detached from a linear object, comprising:
  - 5 a clip body having a base part and a pair of clip parts openably joined to the base part, and
  - a holding part formed on an inner face of at least one of the clip parts for holding the linear object inside the linear object identification tag.
- 10 2. A linear object identification tag according to claim 1, wherein the holding part has a presser part which elastically presses the linear object against an inner face of the base part or the clip part.
3. A linear object identification tag according to claim 1, wherein the  
15 holding part has an anti-disengagement tongue piece, which is formed to extend from an inner face of the clip part, and which prevents the linear object from falling out from between the clip parts.
4. A linear object identification tag according to claim 1, wherein the  
20 holding part has;
  - a presser part which elastically presses the linear object against an inner face of the base part or the clip part, and
  - an anti-disengagement tongue piece, which is formed to extend out from an inner face of the clip part, and which prevents the linear object

from falling out from between the clip parts.

5. A linear object identification tag according to claim 1, wherein a spacing of an aperture part formed at an end of the pair of clip parts is smaller than a width of the base part.
6. A linear object identification tag according to claim 1, wherein on an inner face of at least one of the clip parts is formed a rough surface having a plurality of protrusions at a position where the linear object contacts.
7. A linear object identification tag according to claim 6, wherein the protrusions of the rough surface are a plurality of ridges extending in parallel with a longitudinal direction of a linear object held by the linear object identification tag.
8. A linear object identification tag according to claim 1, further having a band for fixing the linear object identification tag to the linear object, and two or more band holes for passing a band therethrough are formed on at least one of the clip parts.
9. A linear object identification tag according to claim 1, wherein the clip parts have a contour formed with curved lines.

10. A linear object identification tag according to claim 1, wherein each of the pair of clip parts have a wide part which is longer than a length of the base part.
- 5 11. A linear object identification tag according to claim 1, wherein one or more guide parts extending in an orthogonal direction to an inner surface of the base part are provided on an outer face of at least one of the clip parts, and the guide parts engage slidably with a slide member provided in an installation instrument which houses the linear object
- 10 identification tag and installs it on a linear object.
12. A linear object identification tag according to claim 1, wherein the identification label is provided on an outer surface of the clip part.
- 15 13. A linear object identification tag according to claim 1, wherein the identification label has a bar code or a two-dimensional code.
14. An installation instrument for installing the linear object identification tag of claim 1 on a linear object, comprising:
- 20 a slide member which engages slidably with the linear object identification tag;
- an opening guide which holds the linear object, contacts with an inner face of the clip part while the linear object identification tag slides along the slide member, and opens the two clip parts; and

an installation member which makes the linear object identification tag contact the opening guide, opens the two clip parts, and installs the linear object identification tag on the linear object.

- 5    15.    An installation method for installing the linear object identification tag of claim 1 onto a linear object, comprising:

          a step for slidably engaging a slide member with the linear object identification tag;

- a step for making an opening guide hold the linear object, and  
10    making the linear object identification tag slide along the slide member, and making the opening guide contact an inner face of the clip part, and opening the two clip parts; and

- a step for making the linear object identification tag contact the opening guide, opening the two clip parts, and installing the linear object  
15    identification tag on the linear object.

16.    A method for connector interconnection management, which manages an interconnection status of a plurality of connectors with a plurality of connector receptacles, comprising:

- 20           managing the interconnection status of the connector with the connector receptacle, when connection and disconnection of a connector is carried out by a connector interconnection instrument which has a connector connection and disconnection function for connecting a connector to a connector receptacle and disconnecting a connector from

a connector receptacle, by carrying out reading or writing by means of the connector interconnection instrument, for at least one of (i) connector information assigned to a connector, (ii) connector receptacle information assigned to a connector receptacle, and (iii) connector connection presence information indicating whether or not a connector is connected to a connector receptacle.

17. A method for connector interconnection management according to claim 16, wherein

10 the connector information includes connector identification data and connector ancillary data for identifying each connector, and the connector receptacle information includes connector receptacle identification data and connector receptacle ancillary data for identifying each connector receptacle, and reading or writing of this data is

15 performed by the connector interconnection instrument.

18. A method for connector interconnection management according to claim 16, wherein

when carrying out connection and disconnection of a connector,

20 reading or writing of the connector information is carried out by means of the connector interconnection instrument, and reading or writing of the connector receptacle information, or acquisition of the connector connection presence information, is carried out by a connector receptacle board provided with the connector receptacles, to thereby manage

connector interconnection status.

19. A method for connector interconnection management according to claim 16, wherein

5 the connector information is stored on a label provided on the connector or on a linear object connected to the connector, and the connector interconnection instrument includes a read-write device which reads from and writes to the label, and this read-write device reads out or writes the connector information.

10

20. A method for connector interconnection management according to claim 16, wherein

the connector receptacle information is stored on a label provided on the connector receptacle or on a connector receptacle board  
15 connected to the connector receptacle, and the connector interconnection instrument includes a read-write device which reads from and writes to the label, and this read-write device reads out or writes the connector receptacle information.

20 21. A method for connector interconnection management according to one of claims 19 and 20, wherein

the label is at least one of a color bar, a barcode, a two dimensional code, a semiconductor memory, and a wireless tag.

22. A method for connector interconnection management according to claim 19, wherein

the label is given only an independent unique symbol or digit, and the symbol or the digit of the label is read by the connector

5 interconnection instrument, and then connector information for connectors to which the label belongs is input from a hand held device connected to the connector interconnection instrument, and the symbol or digit are associated with the connector information.

10 23. A method for connector interconnection management according to claim 20, wherein

the label is given only an independent unique symbol or digit, and the symbol or the digit of the label is read by the connector

interconnection instrument, and then connector receptacle information for  
15 connector receptacles to which the label belongs is input from a hand held device connected to the connector interconnection instrument, and the symbol or digit are associated with the connector receptacle information.

24. A method for connector interconnection management according to  
20 claim 16, wherein

the connector interconnection instrument acquires the connector connection presence information by detecting at least one of a mechanical change, an electrical change and an optical change which the connector interconnection instrument receives accompanying connection

and disconnection of the connector.

25. A method for connector interconnection management according to claim 16, wherein

5 the connector interconnection instrument acquires the connector receptacle information and the connector connection presence information by detecting at least one of a mechanical change, an electrical change and an optical change which the connector interconnection instrument receives accompanying connection and disconnection of the  
10 connector receptacle.

26. A method for connector interconnection management according to claim 16, wherein

there is provided a radio wave or ultrasonic wave transceiver in  
15 each of the connector receptacle board on which the connector receptacles are arranged, and the connector interconnection instrument, and by analyzing transmission and reception signals between the connector receptacle board and the connector interconnection instrument, the position of the connector interconnection instrument is measured  
20 when the connector is connected or disconnected, and the connection receptacle information or the connector receptacle connection presence information is acquired.

27. A connector interconnection instrument for carrying out connection



and disconnection of a connector to and from a connector receptacle by gripping the connector, comprising:

- at least one of (i) a connector information read-write device, which carries out reading or writing of connector information to or from a label provided on the connector or on a linear object connected to the connector; (ii) a connector receptacle information read-write device, which carries out reading or writing of the connector receptacle information to or from a label provided on the connector receptacle or on a connector receptacle board connected to the connector receptacle; and (iii) a connector connection detecting device, which acquires connector connection presence information indicating whether or not the connector is connected to the connector receptacle; and

a communication device, which transmits and receives each of the information to a computer.

15

28. A connector interconnection instrument according to claim 27, wherein

- the connector information read-write device is a read-write device for a color bar, a barcode, a two dimensional code, a semiconductor memory, or a wireless tag provided on the connector or on a linear object connected to the connector, and

the connector receptacle information read-write device is a read-write device for a color bar, a barcode, a two dimensional code, a semiconductor memory, or a wireless tag provided on the connector

receptacle or on a connector receptacle board connected to the connector receptacle.

29. A connector interconnection instrument according to claim 27,

5 wherein

the connector information read-write device is a read-write device for a semiconductor memory, or a wireless tag provided on the connector or on a linear object connected to the connector, and

the connector receptacle information read-write device is a read-  
10 write device for a semiconductor memory, or a wireless tag provided on the connector receptacle or on a connector receptacle board connected to the connector receptacle, and

the connector interconnection instrument further has a power source excitation section which excites a power source of the  
15 semiconductor memory or the wireless tag.

30. A connector interconnection instrument according to claim 27,

wherein

the connector information read-write device is a read-write device  
20 for a color bar, a barcode, or a two dimensional code provided on the connector or on a linear object connected to the connector, and

the connector receptacle information read-write device is a read-write device for a color bar, a barcode, or a two dimensional code provided on the connector receptacle or on a connector receptacle board

connected to the connector receptacle, and

the connector interconnection instrument has an optical fiber bundle which transmits an image of the color bar, barcode, or two dimensional code to an image recognition section of the read-write device.

5

31. A connector interconnection instrument according to claim 27, wherein

the connector connection detecting device has a sensor which detects a mechanical, electrical or optical change which the connector  
10 interconnection instrument receives accompanying connection and disconnection of the connector.

32. A linear object with a connector, wherein a semiconductor memory or wireless tag which has a record of connector information, is provided  
15 on a connector or on a linear object connected to the connector.

33. A connector receptacle having; a label which has a record of connector receptacle information, and a device for acquiring connector connection presence information indicating whether or not a connector is  
20 connected to the connector receptacle.

34. A connector receptacle according to claim 33, wherein  
the device for acquiring connector connection presence information has a sensor which detects a mechanical, electrical or optical change

which a connector receptacle or a connector receptacle board connected to a connector receptacle receives accompanying connection and disconnection of a connector.

5    35.    A connector receptacle according to claim 33, wherein  
         a label holding the connector receptacle information has a color  
         code, a barcode, a two dimensional code, a semiconductor memory, or a  
         wireless tag.

10   36.    A connector receptacle board provided with a plurality of connector  
         receptacles, comprising:

         labels that have a record of connector receptacle information  
         corresponding to each of the connectors; and

         a device for acquiring connector connection presence information  
15   indicating whether or not a connector is connected to each of the  
         connector receptacles.

         37.    A connector receptacle board according to claim 36, wherein  
         the device for acquiring connector connection presence information  
20   has a sensor which detects a mechanical, electrical or optical change  
         which a connector receptacle or a connector receptacle board connected  
         to a connector receptacle receives accompanying connection and  
         disconnection of a connector.

38. A connector receptacle board according to claim 36, wherein  
a label holding the connector receptacle information has a color  
code, a barcode, a two dimensional code, a semiconductor memory, or a  
wireless tag.

5